

## Claims

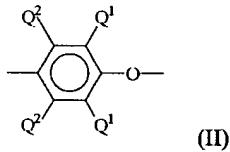
[c1] 1. A poly(arylene ether) blend comprising, based on 100 wt.% of the total blend:  
about 10 to about 90 wt.% of a poly(arylene ether) resin;  
about 5 to about 50 wt.% of a rubber-modified poly(styrene) resin that is a  
tapered block copolymer; and  
about 2 to about 35 wt.% of an organic phosphate flame retardant;  
wherein the blend has a percent transmittance after molding of at least about  
35% measured at 1/8 inch thickness.

[c2] 2. The poly(arylene ether) blend of Claim 1, wherein the organic phosphate  
flame retardant is the bis diphenyl phosphate of bis-phenol A.

[c3] 3. The poly(arylene ether) blend of Claim 1, wherein the organic phosphate  
flame retardant is triphenylphosphate.

[c4] 4. The poly(arylene ether) blend of Claim 1, wherein the organic phosphate  
flame retardant is the bis diphenyl phosphate of resorcinol.

[c5] 5. The poly(arylene ether) blend of Claim 1, wherein the poly(arylene ether)  
resin comprises a plurality of structural units of the formula (II):



wherein for each structural unit, each  $Q^1$  is independently hydrogen, halogen,  
primary or secondary lower alkyl having up to about 7 carbon atoms, phenyl,  
haloalkyl, aminoalkyl, hydrocarbonoxy, or halohydrocarbonoxy wherein at least  
two carbon atoms separate the halogen and oxygen atoms; and each  $Q^2$  is  
independently hydrogen, halogen, primary or secondary lower alkyl having up  
to 7 carbon atoms, phenyl, haloalkyl, hydrocarbonoxy or halohydrocarbonoxy  
wherein at least two carbon atoms separate the halogen and oxygen atoms.

[c6] 6. The poly(arylene ether) blend of Claim 5, wherein each  $Q^1$  is an alkyl group  
having from 1 to 4 carbon atoms, and each  $Q^2$  is hydrogen.

[c7] 7. The poly(arylene ether) blend of Claim 1, wherein the poly(arylene ether)  
resin is selected from the group consisting of homopolymer resins containing

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2,6-dimethylphenylene ether units, random copolymer resins having 2,6-dimethylphenylene ether units in combination with 2,3,6-trimethyl-1,4-phenylene ether units, and copolymer resins derived from copolymerization of 2,6-dimethylphenol with 2,3,6-trimethylphenol.

- [c8] 8. The poly(arylene ether) blend of Claim 1, wherein the rubber-modified poly(styrene) comprises up to about 50% diene monomer units.
- [c9] 9. The poly(arylene ether) blend of Claim 1, further comprising about 1 to about 80 wt.% of a poly(styrene) resin.
- [c10] 10. The poly(arylene ether) blend of Claim 9, wherein the poly(styrene) resin is formed from one or more monomers having the formula (III):  
$$\begin{array}{c} \text{R}-\text{CH}=\text{CH}_2 \\ | \\ \text{C}_6\text{H}_4-(\text{Z})_p \end{array}$$
(III)  
wherein R is hydrogen, a lower alkyl group having from 1 to 7 carbons, or a halogen; Z is a vinyl group, a halogen, or a lower alkyl group having from 1 to 7 carbon atoms; and p is from 0 to 5.
- [c11] 11. The poly(arylene ether) blend of Claim 9, wherein the poly(styrene) resin is formed from one or more of styrene, chlorostyrene, vinyltoluene, alpha-methyl styrene, bromostyrene, dichlorostyrene, and dibromostyrene.
- [c12] 12. The poly(arylene ether) blend of Claim 9, wherein the poly(styrene) resin is a homopoly(styrene).
- [c13] 13. The poly(arylene ether) blend of Claim 9, wherein the poly(styrene) resin is derived from styrene and up to about 10 wt.% monomers having the formula (III) wherein R is a lower alkyl group having from 1 to 7 carbons or a halogen.
- [c14] 14. The poly(arylene ether) blend of Claim 1 further comprising about 1 to about 15 wt.% of an impact modifier.
- [c15] 15. The poly(arylene ether) blend of Claim 14, wherein the impact modifier is selected from the group consisting of styrene-butadiene-styrene, styrene-butadiene, styrene-ethylene-butadiene, styrene-ethylene-propylene, styrene-

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ethylene-butadiene-styrene, styrene-ethylene-propylene-styrene, styrene acrylates, and combinations comprising at least one of the foregoing.

- [c16] 16. The poly(arylene ether) blend of Claim 15, wherein the impact modifier is a styrene-butadiene or a styrene-butadiene-styrene block copolymer.
- [c17] 17. The poly(arylene ether) blend of Claim 1, further comprising one or more of fillers, anti-oxidants, mold release agents, UV absorbers, stabilizers, lubricants, plasticizers, pigments, dyes, colorants, anti-static agents, and blowing agents.
- [c18] 18. A transparent poly(arylene ether) blend comprising, based on 100 wt.% of the total blend:
  - about 10 to about 70 wt.% of a poly(arylene ether) resin;
  - about 10 to about 40 wt.% of a rubber-modified poly(styrene) resin that is a tapered block copolymer;
  - about 10 to about 70 wt.% of a poly(styrene) resin;
  - about 0 to about 10 wt.% of an impact modifier; and
  - about 5 to about 30 wt.% of an organic phosphate flame retardant;wherein the blend has a percent transmittance after molding of at least about 35% measured at 1/8 inch thickness.
- [c19] 19. A transparent poly(arylene ether) blend comprising, based on 100 wt.% of the total blend:
  - about 30 to about 60 wt.% of a poly(arylene ether) resin;
  - about 15 to about 35 wt.% of a rubber-modified poly(styrene) resin that is a tapered block copolymer;
  - about 20 to about 50 wt.% of a poly(styrene) resin;
  - about 0 to about 5 wt.% of a impact modifier; and
  - about 10 to about 25 wt.% of an organic phosphate flame retardant;wherein the blend has a percent transmittance after molding of at least about 35% measured at 1/8 inch thickness.
- [c20] 20. The poly(arylene ether) blend of Claim 1, wherein the blend has a UL rating of V-0.
- [c21] 21. The poly(arylene ether) blend of Claim 1, wherein the blend has a UL rating

of V-1.

- [c22] 22. The poly(arylene ether) blend of Claim 1, wherein the blend has a UL rating of V-2.
- [c23] 23. The poly(arylene ether) blend of Claim 1, wherein after being set on fire the blend will extinguish itself in about 10 seconds or less.
- [c24] 24. The poly(arylene ether) blend of Claim 1, wherein after being set on fire the blend will extinguish itself in about 20 seconds or less.
- [c25] 25. The poly(arylene ether) blend of Claim 1, wherein after being set on fire the blend will extinguish itself in about 30 seconds or less.
- [c26] 26. The poly(arylene ether) blend of Claim 1, wherein the poly(arylene ether) resin has a number average molecular weight of about 3,000 to about 40,000 and a weight average molecular weight of about 20,000 to about 80,000, as determined by gel permeation chromatography.

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